Gr8 Parking

# Project Overview

This project aims to build a system for discovery and rental of parking spaces in the Logan area during special USU events (including sports games and graduation).

This system is designed to be asynchronous, operating in a way similar to Craigslist. There are separate interfaces built for customers, landlords, parking lot attendants, University staff and administrators. All interfaces will be built on web technology, allowing them to run on both computers and smartphones, but each interface will be tuned to the more likely use case.

# Team Organization

This project’s team organization, due to the relative inexperience of our team, will need to be flexible. Each role is a specialization, not an assignment, and we will all be flexible in responsibilities and assignments. Due to Austin Reeve’s job experience, we have given him the role of Senior Developer. Cole Webb has also been given the role of UI Designer.Jeremy Young and Logan Smith are both Developers for the team.

# Software Development Process

The development will be broken up into five phases. Each phase will be a little like a Sprint in an Agile method and a little like an iteration in a Spiral process. Specifically, each phase will be like a Sprint, in that work to be done will be organized into small tasks, placed into a “backlog”, and prioritized. Then, using on time-box scheduling, the team will decide which tasks the phase (Sprint) will address. The team will use a Scrum Board to keep track of tasks in the backlog, those that will be part of the current Sprint, those in progress, and those that are done.

Each phase will also be a little like an iteration in a Spiral process, in that each phase will include some risk analysis and that any development activity (requirements capture, analysis, design, implementation, etc.) can be done during any phase. Early phases will focus on understanding (requirements capture and analysis) and subsequent phases will focus on design and implementation. Each phase will include a retrospective.

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| **Phase** | **Iteration** |
| 1. | Phase 1 - Requirements Capture |
| 2. | Phase 2 - Analysis, Architectural, UI, and DB Design |
| 3 | Phase 3 - Implementation, and Unit Testing |
| 4 | Phase 4 - More Implementation and Testing |

We will use Unified Modeling Language (UML) to document user goals, structural concepts, component interactions, and behaviors.

# Communication policies, procedures, and tools

As a team in a COVID-19 world, the overwhelming majority of our communication takes place virtually through Slack, Google Docs and Zoom. Our primary collaboration tool, however, is GitHub. Github allows us to collaborate on live projects, triage issues and bugs, and work effectively from home.

As far as our policies are concerned, we follow the Golden Rule: we work with each other as we would like to be worked with. We also do our best to use professional, descriptive, well-reasoned language in our discussions and work.

# Risk Analysis

Given that this project is being done in a class, our greatest risk is in failing the class and having to retake it. This class is costing us, in aggregate, a little over $7100, so that is our monetary risk. The other risks in this project are endemic to software development: the cost of making a mistake at the beginning and having to start over, or the cost of putting too much on the shoulders of one person and having them break.

As far as operating costs, we are using APIs that are free at the rate we are using them. Should this project go into production, API calls to the Google Maps platform will need to be budgeted along with all other full-scale deployment costs.

# Configuration Management

See the README.md in the Git repository.